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ABSTRACT

This publication is one of five training manuals that present plans and materials for use in instructing school administrators in some of the concepts, principles, and techniques of educational management. They were developed as part of the Educational Management Project for presentation at weekly inservice meetings for administrators in the Tucson Public Schools in 1973-74. Altogether, the five manuals contain outlines and instructional materials for 15 inservice training sessions; this particular booklet deals with sessions 7, 8, and 10, which focus on the topic of needs assessment. The set of materials for each session includes (1) an instructor's guide and a list of the performance objectives for that session, (2) participant handouts for use as reference material during and after the session, (3) participant worksheets for illustrating or practicing skills introduced during the session, and (4) a posttest for determining whether the participants met the session's objectives. The sessions may be conducted separately as topical workshops or together as a comprehensive one-semester inservice course. (Author/JG)

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EDUCATIONAL MANAGEMENT

AN INSERVICE TRAINING MANUAL FOR EDUCATIONAL ADMINISTRATORS

PART II

NEED ASSESSMENT

Management Study Group Sessions 7, 8, 10

Produced by
The Educational Management Project
E.S.E.A. Title III
Tucson Public Schools
Tucson, Arizona
June, 1974

EA 008 063

TO THE PROSPECTIVE INSTRUCTOR:

These materials are part of a set of 17 sessions for instructing practicing school administrators in some of the concepts, principles and techniques of educational management. They were originally designed to be conducted at weekly inservice meetings for administrators in Tucson, Arizona during the 1973-74 school year.

To become familiar with the scope of educational management, an administrator should participate in all 17 sessions. However, if you are interested in introducing administrators to only certain aspects of the field, almost any session can be conducted as a unit.

Each set of session materials consists of these items:

1) An instructor's guide for conducting each session activity and a list of the performance objectives for that session
2) All participant handouts for use as reference material during and after the session
3) All participant worksheets for illustrating or practicing skills introduced during the session
4) A posttest for determining whether the participants met the session's objectives (which may also be administered as a pretest).

Each two-and-a-half-hour session was designed to be conducted in three parts:

1) Review of the previous session and informal conversation (15-45 minutes)
2) Administration of pretest for current session and posttest for previous session, discussion of posttest (15-30 minutes)
3) Session activities as described in the instructor's guide (up to 2 hours)

Most of the sessions, however, take longer to conduct than two and a half hours. Depending upon the administrators' level of interest and the degree of difficulty they have in understanding session topics, the total time needed can be as much as 5-6 hours. Be prepared to schedule a second meeting to complete each session.

Before you schedule and conduct any of the sessions, make sure you are prepared to lead the discussions and answer any questions raised by the administrators in the group. To help you do this, we have prepared a list of readings keyed to each session topic (or to sets of related topics). This annotated bibliography is available from the Project under the title of "Readings for the Preparation of the Study Group instructor".

EDUCATIONAL MANAGEMENT PROJECT
E.S.E.A. Title III
Tucson Public Schools

Management Study Group

Session 7

Educational Needs and Problems

Objectives

After participating in this session's activities, the participant will:

1. Know the definition of a need. He will be able to correctly define a need in his own words. (16)
2. Know the definition of a problem. He will be able to correctly state the difference between a need and a problem. (14)
3. Comprehend the nature of an adequate description of a need. Given a list of statements, he will be able to identify those statements which are adequate descriptions of needs and those which are not, and will be able to identify the missing information in the inadequate descriptions. (16)

All three of these objectives will be measured by means of a written test before and after the session.

Activities for Part 3 of This Session

7-1. Definition of a Need and a Problem
(45 minutes)

Distribute Handout 7-1, "Need Descriptions: Imposters and Double-Nothings," to the participants. Give the group a few minutes to read the statements on the handout, and then ask them, "From what you've just read on the handout, how would you define a need that is not an 'imposter' or a 'double-nothing'?" Try to elicit from the group what they think are the essential characteristics of a good description of a need.

Have the group try to identify the statements on the handout as "imposters" or "double-nothings" after explaining briefly what these labels mean. Distribute Handout 7-2, "Definitions of a Need and a Problem," to help the participants identify the statements on Handout 7-1. Discuss the correct definition of a need and how it relates to the definition of a problem.

Discuss briefly with the group the process usually followed in the recognition of a problem. Ask them why some agreement on the relative importance of identified needs is usually necessary.

7-2. Practice in Evaluating Need Descriptions
(30 minutes)

Distribute Worksheet A for Session 7 to the participants. Taking one statement at a time, have the participants evaluate its quality as a description of a need. Use these questions to guide their evaluation:

1. What is the discrepancy in this statement that indicates the existence of a need?
2. Is that discrepancy verified by evidence about "what is" and "what ought to be"?
3. If the discrepancy you see is not verified, what are some of the possible meanings of this statement?
4. If the discrepancy is not verified, what evidence would you need to have before you could be certain there was a need to be met?

Need Descriptions: Imposters and Double-Nothings

1. We need to individualize instruction in the elementary and secondary schools of our district.

2. We need more district financing for instructional teacher aides.

3. We currently lack coordination among the departments serving the district. We need to improve coordination among these departments in order to serve school personnel more efficiently and effectively.

4. District educators must develop human relations skills for improving group communication and for improving their ability to perceive the mutual needs of students and educators.

5. Student apathy and lack of self-discipline are evident to various degrees among many of the district's students. We need to initiate new methods for motivating students through a better psychological and sociological understanding of students.

6. Among the most important needs mentioned by those who attended the last faculty workshop were these:

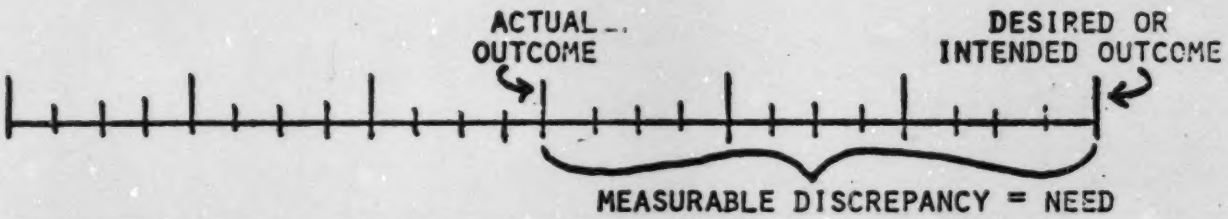
   a. More time for planning.
   b. An additional library aide.
   c. Better materials for individualizing mathematics instruction.
   d. A better plan for conducting parent-teacher conferences.

7. Not enough attention is being paid in our schools' curricula to the study of man-made influences on our natural environment. Environmental studies should be a part of every school's instructional program.

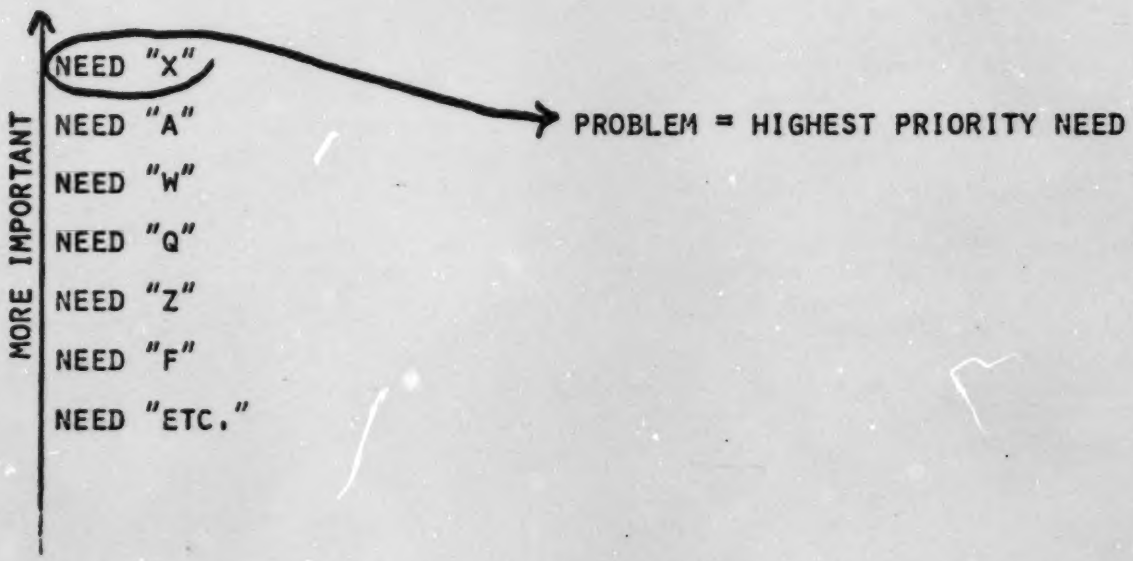
8. Our district's administrators need to improve their decision-making skills in order to more effectively fulfill the responsibilities associated with their roles.

DEFINITIONS OF A NEED AND A PROBLEM

A NEED IS A MEASURABLE DISCREPANCY BETWEEN "WHAT IS BEING ACCOMPLISHED" AND "WHAT SHOULD BE ACCOMPLISHED"



A PROBLEM IS A NEED THAT IS JUDGED TO BE OF SUFFICIENT IMPORTANCE TO MERIT AN ATTEMPT AT RESOLUTION.



Guidelines for Identifying a Need

1. Document discrepancies between "what is" and "what ought to be." Vague language, broad generalizations, and unsubstantiated conclusions can lead to poor decisions if you take them no further.

2. Document discrepancies in such a way that differences in outcomes (actual and desired) are evident. Documenting differences between "what's being done" and "what ought to be done" may verify that a need exists but it won't tell you what that need is. Distinguish carefully between ends and means.

How to Avoid the "Imposters" that Bias Your Decision Making

Imposters are unsubstantiated requests, desires or demands for a particular solution. Imposters are solutions masquerading as needs.

1. Be skeptical of any statement where "need" is used as a verb. Not all such statements are imposters, but they usually are.

2. Avoid situations whenever you can that put you in the position of "justifying" the need for something. It's too easy to "stack the deck" in favor of a low-priority strategy.

How to Make "Double-Nothings" Help You Make a Decision

A "double-nothing" is a generalization that has rhetorical value but which is not supported by the specific evidence you must have in order to make an informed decision. Typically it's a statement of the form, "what-we-need-is-what-we-don't-have"; it doesn't tell you how much we have now nor does it tell you how much would be sufficient. All you know is that the need is there--somewhere.

1. Isolate the variable that seems to be the subject of the statement and ask these questions about it:
   a. To what degree does this desired condition exist now?
   b. To what degree should this condition exist?

   If the statement doesn't provide some definitive answers, start hunting for the data you need. Don't be content with a generalization that may be based on some very limited evidence.

   Another way of generating the information you need is to respond to the generalization with the question, "Why?" Many of these statements are of the form, "we-need-to-improve-such-and-such," so asking "why?" may stimulate answers to the two questions above also.

Worksheet for Evaluating Need Descriptions

DIRECTIONS: Evaluate the following statements as need descriptions by answering these questions about each statement:

a. Is a discrepancy between "what is being accomplished" and "what ought to be accomplished" identified here? If not, is it an "imposter"?

b. If a discrepancy is identified, is it documented by some objective evidence? If not, is it a "double-nothing"?

c. If the statement is a "double-nothing," what questions would you have to answer in order to convert it to a meaningful need description?

d. Is there evidence that any particular solution is being considered prematurely?

1. We must measurably improve learner performance in reading by using validated self-instructional materials in phonics and linguistic structures.

2. On the Session 6 pretest, none of the six participants correctly identified the four good reasons for assigning a task to a committee. At least four of the participants should be able to do this correctly.

3. Twenty percent (20%) of our district's administrators have suffered from stress-caused physical illnesses in the past year. This is an increase of 10 percent over the rate of similar illnesses in the previous three-year period. Within two years, this illness rate must be reduced to no more than 10 percent.

4. During the past year, 425 of the students enrolled in the district were referred for the diagnosis and treatment of serious behavioral problems which adversely affected their learning performance. Of those 425 students, 20 percent were reported to have been successfully treated. More counselors are needed at both the elementary and secondary levels in order to decrease the counselor-student ratio.

EDUCATIONAL MANAGEMENT PROJECT
E.S.E.A. Title III
Tucson Public Schools

Management Study Group
Session 7 Posttest

Name:_____
Date:_____

1. What is a <u>need</u>?

2. What is the difference between a <u>problem</u> and a <u>need</u>?

3. Which of the following are adequate need descriptions?

____The fourth grade students in Our School achieved a mean grade equivalent in mathematics computation of 4.0, while the mean grade equivalent for the national norm group for the test administered is 4.6. It is not unreasonable to expect the children in our fourth grade to achieve at the national norm level.

____"I don't think our staff has ever been exposed to training programs in the individualization of instruction. We need to make a request for a workshop on this topic for our entire faculty."

____A recent survey conducted among the parents of the children in our school showed that 23 percent of those responding supported the present reading instruction program. We should consider revising our reading program since the present one is receiving so little support.

4. What two questions would have to be answered in order to determine whether or not a need exists in each of these "areas of concern"?
   a. "Teachers need to acquire better skills for using instructional objectives in the classroom."
      1.
      2.
   b. "The project staff is concerned about how effectively they are serving teachers and students in outlying areas."
      1.
      2.

Scoring Key
Session 7 Posttest

1. A measurable discrepancy between actual outcomes or results (what is) and desired outcomes (what ought to be).

2. A problem is a need judged to be of sufficient importance to merit some effort to resolve it.

3. The first statement is an adequate need description. (The second is a proposed solution, while the third fails to indicate what the level of support for the program <u>should</u> be.)

4. a. 1. What skills do all teachers possess now?
   2. What skills should they have?

   b. 1. How well are the project staff serving teachers and students now?
   2. What exactly is "effective' service?

(Questions should reflect a consciousness of the necessity to identify <u>present</u> and <u>desired</u> levels of skill or service.)

EDUCATIONAL MANAGEMENT PROJECT
E.S.E.A. Title III
Tucson Public Schools

Management Study Group

Session 8

Needs Assessment Procedure and Techniques

Objectives

After participating in this session's activities, at least 60% of those attending will:

1. Comprehend the need assessment process. From a list of eight assorted activities, the participant will be able to select those which are needs assessment activities and put them in their proper order. (20)
2. Know some techniques for collecting data about present levels of achievement or accomplishment. The participant will be able to name at least three of the data collection devices introduced during the session. (20)
3. Be aware of any needs which may exist in the operation of their school, department or project. The participant will list at least three variables he considers important to the success of his operation that he and his staff can influence by their efforts. (22)
4. Demonstrate a desire to try out the need assessment procedure on some aspect of their systems' operation. The participant will answer in the affirmative when asked whether he would like to conduct a needs assessment for some aspect of his school, department or project. (12)

Activities for Part 3 of This Session

8-1 The Outcomes of a Need Assessment (15 minutes)

Begin a discussion of the purposes of a need assessment by pointing out that needs assessment is a means to an end. Ask the group, "If you do a needs assessment, what do you end up with? What do you have when a needs assessment is over?" Be sure the group members understand that the expected outcome of a needs assessment is (at least) a list of documented discrepancies between what you are accomplishing and what you reasonably could expect to be accomplishing, ranked in their order of importance.

Ask the group another question: "Of what use would this list be to you, the educational manager? Once you have such a list, where do you go from there?" If the members of the group can not readily answer these questions, point out to the group that there is no value in needs assessment unless the educational manager supervising

the assessment intends to use the list as a guide for improving the quality of the program for which he is responsible. Emphasize that a needs assessment, even when done on a small scale, costs too much in time and human effort if it is done only out of curiosity or for "window dressing."

8-2 The Need Assessment Procedure (45 minutes)

Divide the group in half, and give each team Worksheet A for Session 8, cut in pieces as indicated. Instruct the teams as follows:

1) Each team's objective is to arrange the steps of the needs assessment process in their most logical order.
2) All team members must approve of the order in which the steps are arranged; all disagreements must be successfully resolved.
3) When both teams are finished, the group will reconvene and discuss any discrepancies between the sequences established by the two teams.

When this team activity has been completed, distribute Handout 8-1, The Need Assessment Process. If the sequences developed by the teams differ from that shown on the handout, correct the discrepancies and clarify the steps involved to the satisfaction of the group.

8-3 An Approach to the Fifth Step of the Need Assessment Process (40 minutes)

Emphasize to the group that Step 5 of the process, documenting present achievement, is a crucial step in the process, that the quality of the whole need assessment effort depends upon the accuracy and relevance of the data collected about "what is being accomplished." Remind the group that a need, a discrepancy, cannot be accurately identified unless its "endpoints," "what is being accomplished" and "what we should be accomplishing," are located as precisely as possible.

Tell the group they can approach this difficult step by asking (and answering) this series of questions:

1) What exactly do I need to know?
2) What kinds of data will yield answer(s) to my question(s)?
3) Where will I find these data (or from whom can I get them)?
4) How will I collect these data?

In order to demonstrate the necessity of knowing ahead of time what specific information you are seeking, distribute Worksheet B and ask each member to write down what kinds of data he would seek for answering the question on the worksheet. If any group members seem confused by this instruction, distinguish "data" from "information" as defined in the Project's Glossary, and give an example of each.

Compare the kinds of data the group members said they would seek to answer the question on the worksheet, pointing out the variety in their responses. Ask the group, "Which are the best kind of data of those you have listed?" Point out to the group that the lack of specificity in the question invites the variety of responses they gave and creates difficulty in determining what kinds of data would be most appropriate.

Ask the group to repeat the process they have just completed with this more specific question: "In the past year how frequently have I asked my staff members to do things on a 'rush' basis that upset their planned work schedules?" Again ask the group to read their responses and again compare for variety. Point out the greater similarity in their responses this second time and observe how much easier it was to identify the kinds of data needed to answer the question. Point out that careful specification of the information you need has these advantages:

1) It helps you avoid wasting valuable time and effort collecting and analyzing superfluous data.
2) It makes it easier to answer the remaining three questions for Step 5 of a needs assessment more confidently.
3) It helps you make sure that the data you get is the data you need.

8-4 Data Collection Tools and Techniques for Step 5 of the Need Assessment Process (40 minutes)

Remind the group that the need assessment process starts basically with an attempt to identify the valued outcomes of the particular system under study and that these "valued outcomes" are rarely, if ever, directly observable. Most of our "valued outcomes" are abstractions than can only be inferred; such abstractions as knowledge, skill, competence, coordination, communication, or positive attitudes can only be inferred to exist. Any data collection device can only indirectly measure the existence of these valued outcomes. They do so by measuring the existence or non-existence of conditions or behaviors which we agree are indicative of the outcome we value.

In selecting a data collection device, three things should be kept in mind.

1) The more directly you seek data, the more accurate your data is likely to be.
2) The more widely you seek data, the more representative your data is likely to be.
3) The more systematically you seek data, the more valid your data is likely to be.

The ideal data collection device would identify all the relevant behaviors of every member of the population under study or all the relevant conditions or incidents which occur in the setting under study. This not being possible, all data collection devices are means of systematically sampling behaviors, conditions or incidents.

Distribute and discuss Handout 8-2, Some Common Means of Collecting Data. Ask the members of the group if they can think of any other comparable devices for collecting certain kinds of data. Develop a definition of these devices and instruct the participants to add these to their handouts. Discuss the advantages and disadvantages of these techniques as well.

(Distribute to participants either cut in pieces on the dotted lines or reproduced on cards.)

Describe the area to which your assessment is to apply: the size and composition of the staff, the size and composition of the client population, the nature of the consumer population, etc.

- -

Answer the questions, "What's important to each of these three populations? What kinds of outcomes seem the most crucial to success? What staff, client and consumer characteristics are important?"

- -

Actually state, in a written list, all of the valued outcomes and characteristics you have identified. (Hint: State as adjective-plus-noun phrases, such as "qualified staff," interested parents," etc.)

- -

Apply the Goal Analysis Process to each of the goals in turn to get a list of "success indicators." Develop each indicator statement into a performance objective.

- -

Apply the measurement techniques you developed for your performance objectives to the present situation. Tabulate and analyze the data you collect.

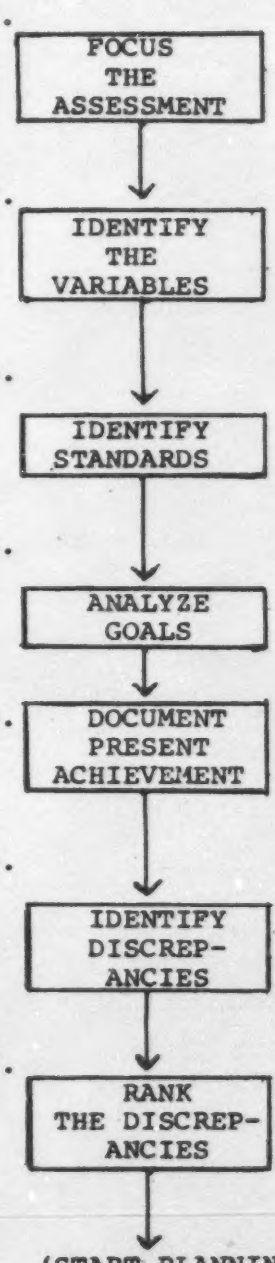
- -

Compare each set of data you've analyzed with the performance objective to which it pertains. Identify and record any differences between "what is being accomplished" and "what we should be accomplishing."

- -

Develop in writing a list of criteria for rating the relative importance of each discrepancy you've identified. Apply these criteria to get a list of ranked needs.

THE NEED ASSESSMENT PROCESS



1. Describe the area to which your assessment is to apply: the size and composition of the staff, the size and composition of the client population, the nature of the consumer population, etc.

2. Answer the questions, "What's important to each of these three populations? What kinds of outcomes seem the most crucial to success? What staff, client and consumer characteristics are important?"

3. Actually state, in a written list, all of the valued outcomes and characteristics you have identified. (Hint: State as adjective-plus-noun phrases, such as "qualified staff," "interested parents," etc.)

4. Apply the Goal Analysis Process to each of the goals in turn to get a list of "success indicators." Develop each indicator statement into a performance objective.

5. Apply the measurement techniques you developed for your performance objectives to the present situation. Tabulate and analyze the data you collect.

6. Compare each set of data you've analyzed with the performance objective to which it pertains. Identify and record any differences between "what is being accomplished" and "what we should be accomplishing."

7. Develop in writing a list of criteria for rating the relative importance of each discrepancy you've identified. Apply these criteria to get a list of ranked needs.

1. Assume for the moment that you have just added a person to your staff whose only function is to collect the data you need to help you identify needs in your school, department, or project. Assume also that you have formulated this question for Step 5 of a need assessment you're doing:

   What is the present level of morale among my staff members?

   List below the kind(s) of data you would ask this person to collect for you:

2. Your data collector is inclined to ask you to justify and explain your requests for data almost more often than you'd wish. After one of these incidents, the two of you agree to replace your original question (see #1) with a set of ten questions, one of which is:

   _____

   _____

   _____

   _____

   Describe below the kind(s) of data you would ask your data collector to find <u>now</u>:

Some Common Means of Collecting Data

KIND OF INSTRUMENT	DATA RESULTING	ADVANTAGES, DISADVANTAGES
WRITTEN SURVEY TO ALL MEMBERS OF A POPULATION OR TO A RANDOM SAMPLE: A set of written questions to which people are asked to respond in writing.	(Can vary considerably from "hard" data about sample characteristics to "soft" data about the sample's opinions)	For large sample populations, compilation of results is time-consuming; written responses do not always distinguish "shades of meaning"; semantic problems are often not identified; return rate is often low; but "hard data" not otherwise recorded can be systematically collected; relationships between certain variables can be statistically evaluated; relatively large numbers of people can be polled.
STRUCTURED INTERVIEW: A face-to-face interview in which the persons being interviewed are asked the very same questions in every interview, a kind of one-way communication with feedback.	(Same variability as for written surveys)	Complex scheduling problems; length of time required for an interview reduces the number of people who can realistically be polled; uniformity of interviewer behavior hard to maintain from interview to interview or from interviewer to interviewer; interviewing requires relatively skilled data collectors; but interview responses can be checked for clarity through paraphrasing; usually 100 percent of a sample can be polled; people are often more comfortable talking than writing.
RECORD SEARCH: The compilation of selected facts from existent records, either on a sampling basis or for an entire population.	Mostly "hard" data such as numbers of people having certain characteristics or experiences; frequency of certain incidents which are recorded on permanent records, etc.	Done manually, it can be very time-consuming; quality of data is dependent upon the quality of the records; kind of data is limited by what is available in the records; but when records are stored via EDP, data can be obtained very quickly; because most records are uniformly kept, reliable data can be obtained about a large population.

KIND OF INSTRUMENT	DATA RESULTING	ADVANTAGES, DISADVANTAGES
OBSERVATION CHECKLISTS: Written instruments for recording selected overt behaviors.	Data regarding the frequency with which certain desired behaviors are exhibited by a given person within a certain period of time.	Requires trained observers; accuracy is difficult to maintain; relatively small populations can be observed; but more valid data is acquired than if the persons being observed are asked to report their behaviors.
STANDARDIZED TESTS: Instruments for measuring specified kinds of knowledge, the results of which can be compared to those obtained from the population in general.	Data regarding the degree of knowledge or skill in a specific area possessed by a given group of people.	Use is limited to the measurement of the behaviors stated by the test; statistical interpretations can be confusing; but data obtained is statistically valid and reliable enabling comparisons over time or from group to group.
NON-STANDARDIZED TESTS: Instruments which are "locally" designed to measure specific kinds of knowledge or skill possessed by a group of people. Best example: teachers' classroom tests.	(Same as for standardized tests)	Usually less reliable and less valid than standardized tests; time must be spent developing the instrument; but the test is "custom-made" for the program so data are typically more relevant.
LOGS: Instruments for recording prespecified activities or incidents.	Rate of occurrence of certain desirable (or undesirable) incidents; amount of time spent in conducting certain activities, etc.	Resistance among those filling out logs is common; orientation and supervision can be time-consuming; high rates of error or omission in recording can affect accuracy of data; but it is an excellent means of relating day-to-day activity to long-term objectives.

EDUCATIONAL MANAGEMENT PROJECT
E.S.E.A. Title III
Tucson Public Schools

Management Study Group
Session 8 Posttest

Name:_____
Date:_____

1. In the list below, identify those activities which are part of a need assessment process and number them in their proper sequence.

____ Describe the area to which your assessment is to apply.
____ Make a list of all program activities.
____ Document present achievement or accomplishments.
____ Identify the variables that are most important to investigate.
____ Analyze the goals and establish specific objectives.
____ Identify the possible causes of the problems which are identified.
____ Identify and record any differences between "what is being accomplished" and "what we should be accomplishing."
____ Investigate possible solutions to the problems identified.

2. Name three data collection devices that can be used in a need assessment to collect data about "what is."

a)

b)

c)

3. Name three valued outcomes or desirable conditions or qualities that you and your staff can achieve or may already have achieved. (For example, if you are a principal of a school, you may list "a high degree of interest in curriculum matters among the parents of our students.")

a)

b)

c)

4. Would you like to undertake a need assessment effort in order to find out to what degree you and your staff are actually achieving the valued outcomes you've listed above?

____ Yes. How would such a need assessment help you as a manager?_____

____ No. Under what conditions would you consider such an effort in the future? _____

_____

Scoring Key
Session 8 Posttest

1. 1- Describe the area to which your assessment is to apply.
   2- Identify the variables that are most important to investigate.
   3- Analyze the goals and establish specific objectives.
   4- Document present achievement or accomplishments.
   5- Identify and record any differences between "what is being accomplished" and "what we should be accomplishing"

2. Any three of the following:
   - Standardized tests
   - Non-standardized (teacher-made) tests
   - Surveys
   - Interviews
   - Logs
   - Record searches
   - Observation checklists

3. (All responses must be descriptive of outcomes, not activities.)

4. Preferable answer: Yes, because it would help me plan how to improve my program in those areas which are most important (or some related idea).

Educational Management Project
E.S.E.A. Title III
Tucson Public Schools

Management Study Group

Session 10

Problem Identification and Analysis

Objectives

After participating in this session's activities, 60% of the participants will:

1. Know the criteria for recognizing problem situations that require systematic decision making (analytical problem-solving). Given an assortment of five problem statements, he will be able to correctly identify the problem to which the decision-making process would be most applicable. (14)
2. Comprehend the problem analysis step of the systematic decision-making process as interpreted through the use of the force-field technique of diagnosing a problem. The participant will be able to describe the procedure followed in the use of this technique and the results of using this technique in progressing through the steps of the decision-making process. (21)

Activities for Part 3 of This Session

10-1 Identifying Problems (20 - 30 minutes)

List the following questions on the chalkboard:

1) What is a problem?
2) How are problems usually identified?
3) At what stage in the decision-making process are you when you reach the point of identifying a problem?

Ask the participants to refer to their notebooks to answer the first question. If they have difficulty locating the handouts pertaining to the definition of a problem, refer them to Session 7, Handout 7-2, Definitions of a Need and a Problem. Encourage a brief discussion of this definition to assure participant understanding.

Ask the participants to describe the circumstances under which they first become aware that a problem exists that requires their attention. List these circumstances on the chalkboard and then point out that in all or most of these situations they are receiving information pertaining to either 1) an unmet need 2) an unused opportunity or 3) an impending "programmed" decision (one required by law or policy for which there are procedures established).

Refer the participants to Session 3, Handout 3-1, The Five Stages of the Systematic Decision-Making Process, and draw their attention to the third question. Discuss the systematic decision process in terms of the rigorous information seeking and intellectual effort the process seems to require of the decision-maker. Ask the participants if they think it advisable and practical to apply this process to every situation they encounter where a decision must be made.

10-2 Determining Problem Significance (30 - 35 minutes)

Explain to the group that the significance of a problem determines whether or not the systematic decision-making process is applicable. Significance can be judged by estimating 1) the amount of change likely to result from the solution to the problem and 2) the amount of information available for analyzing the problem and developing a solution. Draw a two-by-two matrix on the chalkboard, labeling the cells "High Information" and "Low Information" at the left and "Small Change" and "Large Change" across the top. Define the concepts of programmed and non-programmed decisions in terms of the matrix cells, pointing out that programmed decisions generally do not merit the rigorous effort of the systematic decision-making process. Explain the size-of-change criterion used to distinguish small changes from large changes in low information situations.

Ask each participant to describe in writing a problem in which he is currently or was recently involved. Distribute Handout 10-1, Checklist for Determining Applicability of the Systematic Decision-Making Process. Ask the participants to individually examine the problem descriptions they have written and determine whether the systematic decision-making process is applicable. After a few minutes, ask each participant to report the results of using the checklist to evaluate his problem description.

10-3 The Force-Field Technique for Analyzing Problems (45 - 60 minutes)

Distribute Handout 10-2, The Force-Field Technique for Diagnosing Problems, to the participants. Referring to this handout, describe the utility of the technique and the procedure to follow in using it. Using one of the participant problem descriptions determined to be applicable to the decision-making process, formulate with the group an acceptable goal statement with which to begin the force-field analysis. (If none of the participants' problem descriptions was judged applicable to the use of the decision-making process ask the group to suggest a problem they believe would fit the criteria on the checklist.) Have the participants generate as many forces restraining and facilitating goal accomplishment as they can in 15-20 minutes.

Explain more thoroughly the criteria used to judge the strength, validity and potency of each force identified. Ask the participants to rank each force in terms of these three criteria. Ask the group whether they feel that having a written list of ranked forces would make it easier to develop possible solutions to the problem than not having such an analysis of the problem.

Checklist for Determining the Applicability of the Systematic Decision-Making Process

The Systematic Decision-Making Process requires a considerable amount of analytical thinking and information gathering on the part of the decision maker. Because the process takes a certain amount of time and effort, you, the decision maker, should be fairly sure when you begin that the decision you need to make is worth the time and effort involved in using the process. The following checklist can help you identify those problems to which the process best applies.

The two main criteria to use are 1) the amount of change likely to be brought about by solving the problem and 2) the amount of information there is probably available to help you solve the problem.

	SMALL CHANGE	LARGE CHANGE
HIGH INFORMATION GRASP	A	B
LOW INFORMATION GRASP	C	D

The Four Kinds of Problem Situations

Type B problems are probably non-existent; those involving large changes in the educational system rarely, if ever, are supported by large amounts of extant decision-making information. Type A problems are relatively easy to solve once you locate the law, policy or set of procedures which apply or once you recognize that the same decision has been made repeatedly. Type A problems are called programmed decisions by the decision theorists.

Type C problems are more amenable to the use of the systematic decision-making process. Solving Type C problems does not bring about monumental changes in educational practice but does involve incremental improvements on a small scale. Type C solutions are solutions which probably have not been tried before but which will not bring large scale disaster if they fail. Because little information is available about the likely success of any alternative solutions considered, the success of Type C problem solving depends more heavily on the good judgment of the decision maker(s) than problem solving of the A and B types.

Type D problems are relatively rare in the daily experience of the school district administrator. The changes likely to be brought about by the solution of these problems are so great and the consequences of failure so formidable that years are usually spent in the effort to solve them. A great deal of time and effort must be spent in creating the bank of information needed to guide the decision-maker(s) involved in the problem's solution. State, regional and national educational research institutions are usually the decision makers involved in Type D problem solving.

Consequently, the school district administrator encounters two major types of problems, the Type A problem and the Type C problem. Type A problems can also be called "programmed decisions" in that little judgment is necessary on the part of the decision maker other than the judgment as to whether a particular situation he is facing fits the conditions prescribed by law, policy, standard procedure, or past experience. The information needed to guide a Type A decision exists; the decision-maker is merely responsible for finding and applying it as prescribed. Using the systematic decision-making process to solve Type A problems is more an exercise than a necessity.

The school district administrator is wise to use the systematic decision-making process in solving Type C problems, however. The analytical thinking and information gathering required by the process can help the decision maker avoid the professional embarrassment of repeated failures to solve short-range problems caused by poor judgment and too little information.

Checklist

The problem facing you is a Type C problem and therefore amenable to the use of the systematic decision-making process if you can answer all of the following questions as indicated.

_____1. Will any of the following tell me what to do about this problem?
- -A state law
- -A State Department of Education policy or regulation
- -A School Board policy or regulation
- -A district policy or regulation (written or unwritten)
- -Any of my department's or school's policies or regulations

_____2. Has a problem like this come up before in my own experience or in the experience of others I know, and was the solution adequate?

_____3. Will the solution to this problem affect only an individual student or staff member (or a small number of them)?

If you answered "no" to any one of the above questions, you may be facing a problem significant enough to warrant using the systematic decision-making process. Check to be sure by asking yourself these questions:

_____ 4. Is the solution to this problem likely to necessitate a significant change in the operation and activities of an entire organizational unit (the whole district, my entire school or department, all personnel in a single discipline, etc.)?

_____ 5. If someone else (or some other group of people) were to work at solving this problem independently from me (us), would he (they) probably decide on a different, but equally reasonable, solution?

_____ 6. Right now, does there seem to be only one way of solving this problem (or maybe one way with a couple of variations)?

If you answer "yes" to any one of these questions, you are probably faced with a Type C problem. The time and effort involved in using the five-step decision-making process will probably be well spent if you start now. Get together soon with the people you need to start analyzing this problem and collecting the information you need.

Handout 10-2

FORCE FIELD TECHNIQUE OF DIAGNOSING A PROBLEM

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University of Michigan
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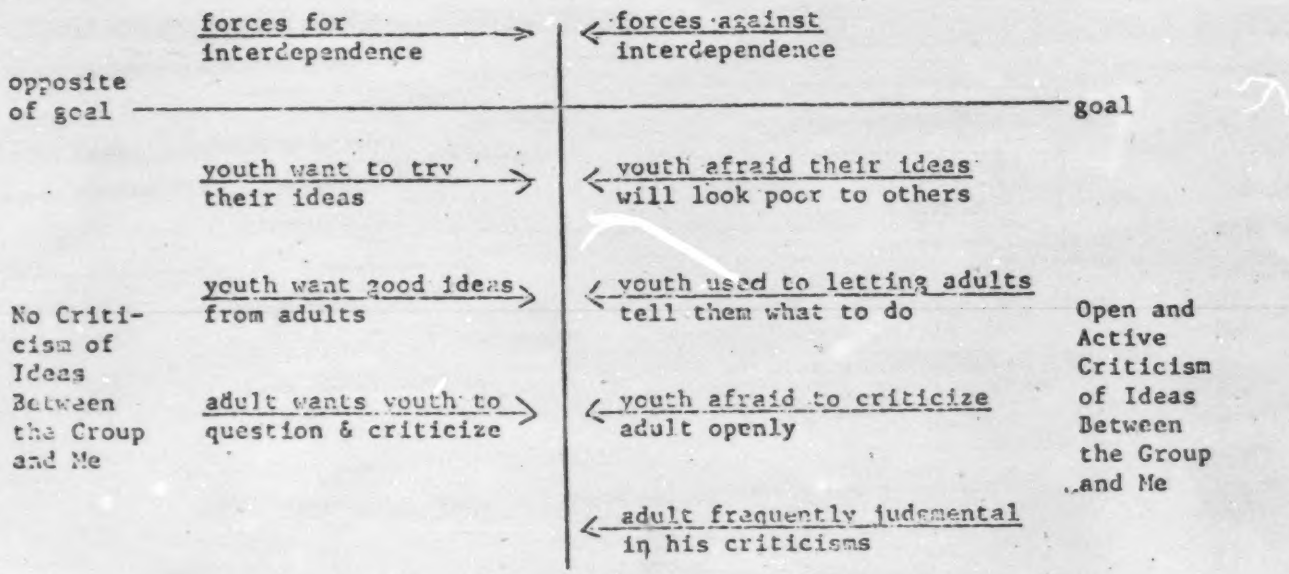
To use this technique, one must first state a problem in terms of a clear goal. An example will be used to illustrate the technique. Mr. Jones is a youth worker who states his problem as follows:

> As an adult working with a group of youths, I'm concerned about developing interdependence between us. I don't want the youth in our group to do things just because I suggest them. On the other hand, I don't want them to reject ideas just because they come from the adult. I have a goal of the group becoming more open and active in criticizing what they see as helpful and nonhelpful in my suggestions and of seeking my reactions to theirs.

Mr. Jones is now ready to write out his first force field. He takes a blank sheet of paper and writes the general nature of the problem at the top. He then draws a horizontal line across the top. On the left side of the line he writes "forces for interdependence". On the right side he writes "forces against interdependence". In the right-hand margin of the paper he writes the goal which he has specified for his problem, "open and active criticism of ideas between the group and me". In the left-hand margin of the paper he writes the opposite of his goal, "no criticism of ideas between the group and me". Now he draws a vertical line down the middle of the page. This line represents the way things are at the moment with regard to openness and activeness of criticism between him and the group. Things are the way they are at the moment because there is a set of forces pushing from the left toward openness and activeness of criticism, and an equal set of forces pushing from the right against openness and activeness. If the forces on the left become stronger while those on the right stayed the same or got weaker, then the line would move toward the right - toward more openness and activeness. Mr. Jones must now write out what he believes to be the important forces operating in this situation. Diagram I presents his first effort at writing out the force field.

DIAGRAM I

Force Field #1 - Interdependence Between the Group and Me

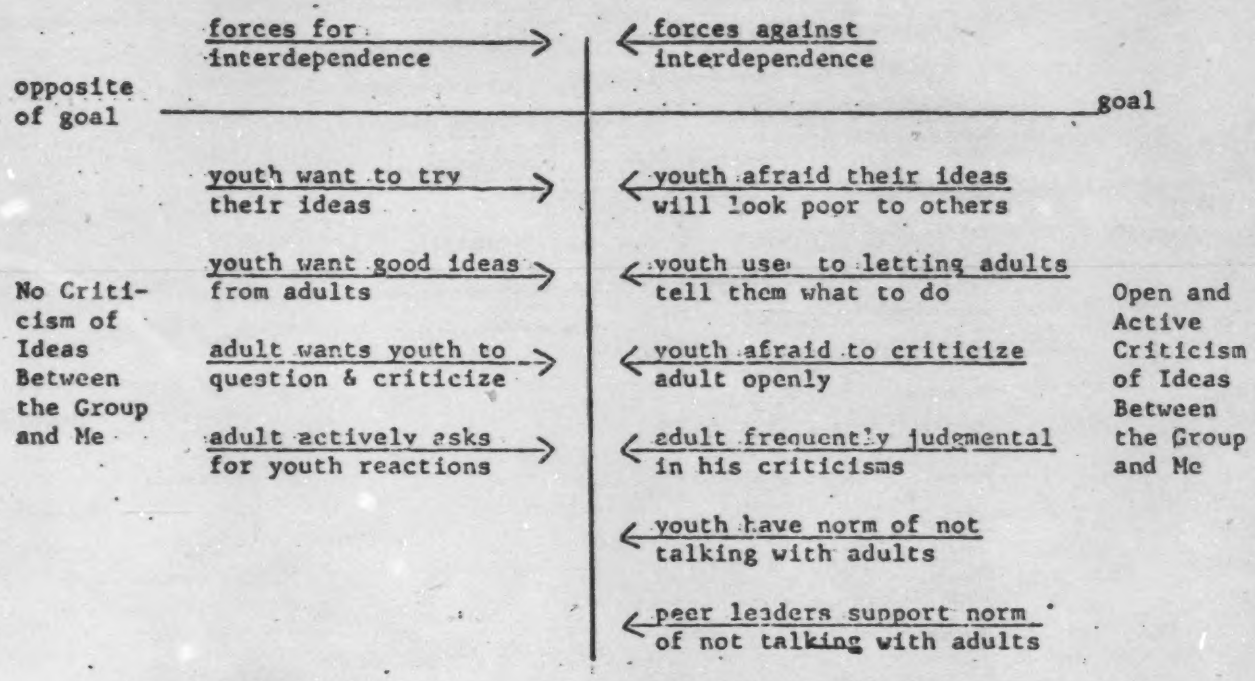

forces for interdependence
forces against interdependence
opposite of goal
goal
youth want to try their ideas
youth afraid their ideas will look poor to others
youth want good ideas from adults
youth used to letting adults tell them what to do
No Criticism of Ideas Between the Group and Me
Open and Active Criticism of Ideas Between the Group and Me
adult wants youth to question & criticize
youth afraid to criticize adult openly
adult frequently judgmental in his criticisms

Mr. Jones wasn't very satisfied with his first effort to draw the force field. He guessed that there must be additional forces than the ones he had thought of. During his next meeting with the youth, he raised the question of how people felt about discussing each other's ideas. He asked specifically for their reactions to some of the ideas he had recently suggested. He especially asked them to share their reactions to the weak aspects of these ideas and how they might be improved. The youth seemed pleased at being asked for their reactions. They also seemed reserved about giving them. One of them told him privately later, "We just don't talk about that with adults. I would have said some things, but the other kids would have thought I was being an apple polisher."

Mr. Jones believed he had learned two things from the discussion. One was that an additional "force for" was to actively ask the youth for their reactions. Another was that there was some kind of norm among the youth about not talking to adults in a way that would be seen as "apple polishing". This norm appeared to be an important "force against". He thought maybe the peer leadership of the group was an important "force against" which was affecting the way this norm operated in the group. In Diagram II we see how Mr. Jones added these three forces to the force field.

DIAGRAM II

Force Field #2 -- Interdependence Between the Group and Me


forces for interdependence
forces against interdependence
opposite of goal
goal
youth want to try their ideas
youth afraid their ideas will look poor to others
youth want good ideas from adults
youth used to letting adults tell them what to do
No Criticism of Ideas Between the Group and Me
Open and Active Criticism of Ideas Between the Group and Me
adult wants youth to question & criticize
youth afraid to criticize adult openly
adult actively asks for youth reactions
adult frequently judgmental in his criticisms
youth have norm of not talking with adults
peer leaders support norm of not talking with adults

Mr. Jones now did three additional things with his force field. First he ranked all of the forces in terms of how important he thought they were in trying to change the situation. He put a number 1 by that force field which he believed would yield most movement toward the goal if it could be changed. He put a 2 by the force that he thought would result in the second greatest amount of movement if changed - and so forth. Second, he rated each force in terms of how easy he thought it would be for him to bring about some change in it. He gave each force a rating of hard, medium or easy. Third, he again rated each force, this time in terms of how clear he was about whether it really was a force. Was he just imagining it to be a force or was it really operating? He labeled each force as clear, partly clear, unclear. Diagram III presents Mr. Jones' force field at this point.

SUMMARY FOR CRITERIA FOR RANKING AND RATING

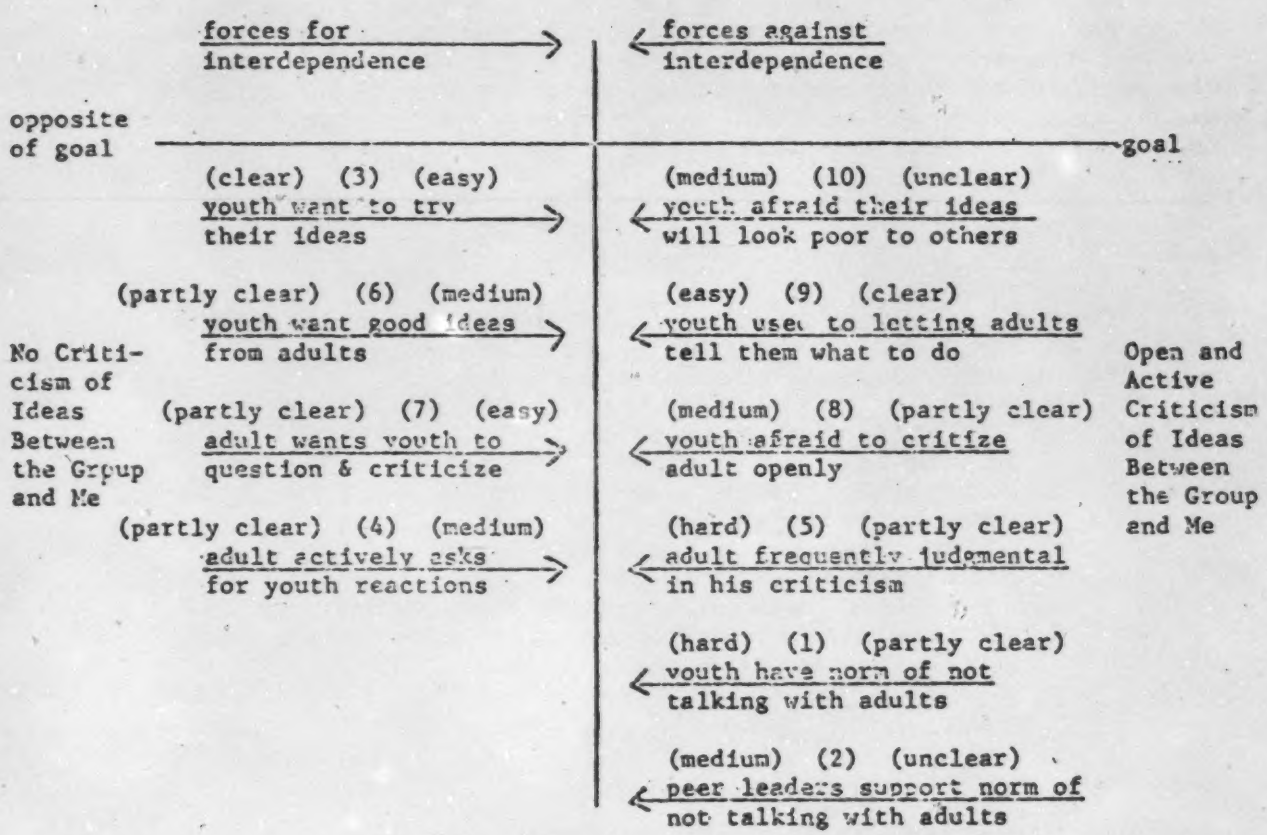
Strength is defined as resistance to change. How strong is a force in changing a situation--is it hard, medium, easy?

Clarity refers to validity. What evidence is there that it is a force?

Potency refers to the degree of influence the force has in weighing. How important is it? How would you rank it?

DIAGRAM III

Force Field #2 - Interdependence Between the Group and Me


forces for interdependence
forces against interdependence
opposite of goal
goal
(clear) (3) (easy)
youth want to try their ideas
(medium) (10) (unclear)
youth afraid their ideas will look poor to others
(partly clear) (6) (medium)
youth want good ideas from adults
(easy) (9) (clear)
youth used to letting adults tell them what to do
No Criticism of Ideas Between the Group and Me
(partly clear) (7) (easy)
adult wants youth to question & criticize
(medium) (8) (partly clear)
youth afraid to critize adult openly
Open and Active Criticism of Ideas Between the Group and Me
(partly clear) (4) (medium)
adult actively asks for youth reactions
(hard) (5) (partly clear)
adult frequently judgemental in his criticism
(hard) (1) (partly clear)
youth have norm of not talking with adults
(medium) (2) (unclear)
peer leaders support norm of not talking with adults

Now Mr. Jones had a picture of what he thought was going on in his problem situation. The most important thing that stood out to him was that he was not very clear about some of the forces which he guessed to be important. He went back to the youth to get more information about forces that were not clear. He got this information both through discussions and by using questionnaires. The force which he had ranked as most important seemed so complex to him that he wrote out a force field diagram about it!

This helped him identify further forces and questions he needed to discuss with the youth. Mr. Jones also began to consider ways he could alter some of the forces. He put some of these alternatives into action. His efforts to get information from the youth so as to diagnose what the force fields were turned out to be an action plan in itself which proved helpful. Mr. Jones found the group changing in direction of his goal.

At the end of several weeks, Mr. Jones found it helpful to look back over his efforts. He could note the changes which had occurred in his force field over time. He knew that his current force field diagram was much more accurate than his first attempts had been. It was based on careful data gathering. He had gathered some kinds of data several times so that he could see evaluatively how some of the forces had changed in response to the action efforts which he and the youth had worked out. Most exciting to Mr. Jones was his discovery that he could share the force field technique with the youth. Now they were working together on diagnosing goal situations, planning action for the group, and evaluating the reasons for success and failure.

SUMMARY

A person applying the force field technique in diagnosing a problem and/or deriving the most appropriate solution will have completed the following process steps:

1. Identified a problem/goal
2. Communicated a problem applying all criteria
3. Listed forces <u>for</u> and <u>against</u> in proper form
4. Rated forces in numerical scales
5. Ranked forces in numerical scales
6. Gathered data about problem
7. Evaluated data and derived other forces, etc.
8. Derived and stated appropriate solution strategy
9. Evaluated solution effectiveness

Educational Management Project
E.S.E.A. Title III
Tucson Public Schools

Management Study Group

Session 10 Posttest

Name: _____

Date: _____

1. The five-step decision-making process we are studying is applicable to all decision situations, but is not really practical in all situations. Listed below are descriptions of five problems of various kinds. Check the one for which using the five-step decision-making process would be the most practical.

   _____ From which vendor should our district purchase office duplicating supplies next year?
   _____ Which students in Mr. X's math class will receive 1's this semester?
   _____ In what ways can we achieve articulation of the math curriculum from grades K though 12?
   _____ To which schools should my staff members be assigned next year?
   _____ How can I organize our regular staff meetings so my staff's regular duties are not unnecessarily interrupted?

2. a. Describe the procedure followed in using the force-field technique for analyzing problems.

   b. How does the information generated by a force-field problem analysis help you make a decision?

1. Check "In what ways can we achieve articulation of the math curriculum from grades K through 12?"

2. a. 1) Formulate a goal statement.
   2) List restraining and facilitating forces affecting goal accomplishment.
   3) Rank forces as to strength, clarity and potency.

   b. It specifies more clearly what forces should and can be influenced in order to solve the problem (i.e., reach the goal).

   and/or

   It helps you (at the third step of the decision-making process) to create alternative solutions to the problem.